



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,476	04/09/2004	David B. Alsobrook	A-9885	1082

5642 7590 04/06/2009  
SCIENTIFIC-ATLANTA, INC.  
INTELLECTUAL PROPERTY DEPARTMENT  
5030 SUGARLOAF PARKWAY  
LAWRENCEVILLE, GA 30044

EXAMINER
----------

LUONG, ALAN H

ART UNIT	PAPER NUMBER
----------	--------------

2427

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

04/06/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOmail@sciatl.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/821,476	<b>Applicant(s)</b> ALSOBROOK ET AL.	
	<b>Examiner</b> ALAN LUONG	<b>Art Unit</b> 2427	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 12, 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 4-6, 13 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/05/2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Response to Amendment***

1. Claim 4 is sought to be amended. New claim 12-16 are added. Claims 1-6, 12-16 remain pending in the application

### ***Drawings***

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the applicant amended claim 4 recites *“a downstream modulator located in the headend facility for **receiving** signals corresponding to the optical signals and for **sending** forward signals downstream to the at least one DHCT via the ONT”* that requires reference characters “365” and “355” of Fig. 3 respectively; using bi-directional arrow. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “355” has been used to designate both Optical Network of Fig. 3 and QAM of Fig. 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being

Art Unit: 2427

amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12, 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, claim 12 (new) recites "**a single wire return device (SWRD) such that a single wire is provided between the modulator and the at least one DHCT**" (pages 4 lines 6-7), claim 15 (new) recites "**a single wire return device (SWRD) such that a single wire is provided between the receiving device and the at least one DHCT.**" (pages 5 lines 4-5).

The claim 12 as recited present a logical inconsistency such that "**a single wire return device (SWRD)**" communicates to DHCT by telephone line, provides Ethernet data to computer of DHCT and downstream/Upstream by connection between SWRD

Art Unit: 2427

and DHCT (**specification, Fig. 3 page 5, lines 1-24**) The specification does not enable one skilled in the art to realize that a single wire is provided between the modulator and the at least one DHCT as disclosed in Fig.3 of invention.

The claim 15 as recited present a logical inconsistency such that “**a single wire return device (SWRD)” or the receiving device** communicates to DHCT by telephone line, provides Ethernet data to computer of DHCT and Downstream/Upstream by RF connection between SWRD and DHCT (**specification, Fig. 3 page 5, lines 1-24**) The specification does not enable one skilled in the art to realize that a single wire is provided between the receiving device (SWRD) and the at least one DHCT as disclosed in Fig.3 of invention. Example: CAT-5 internet cable is not a single wire, but is rather a number of braided wires.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims **1-3 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. 2002/0063924 by Kimbrough, in view of US Pat. 6,857,132 to Rakib et al.

**Regarding to claim 1:** Fig. 1 of Kimbrough illustrates **A fiber-to-the-home (FTTH) system [10] for transmitting and receiving IP signals, the FTTH system [10] including a headend facility [12] in communication with a plurality of subscriber**

Art Unit: 2427

**premises [16] though Optical Network [14], (Kimbrough, ¶0050-¶0051, ¶0054) each subscriber premises [16] comprising:**

Fig. 9 illustrates a Home Network Unit [50] includes QuPlexer [52] **as an optical network terminal (ONT) for receiving downstream** as 1550nm A/V Optical signal from Optical input [174] **and** 1310nm voice and data information as **upstream IP signals** from Laser driver [162] coupled with receiver [160] and FBGA [150] which includes demodulator using 25MHz reference of PLL [152] for detecting data packets **(Kimbrough, ¶0112-¶0114)**, the optical network terminal (ONT) [52] converts the 1550nm A/V Optical signal into RF signals routes it to **at least one digital home communications terminal (DHCT)** associated with CATV [60] or DBS [58] of Fig. 1, through connector [172] **for receiving the RF signals** for distribution on TV **(Kimbrough, ¶0112) and** Kimbrough also teaches the FBGA [150] also drives Ethernet PHY [54] **for routing the IP signals to a coupled device or the FTTH system (Kimbrough, ¶0116);**

Fig. 10, 11 of Kimbrough illustrate **a receiving device** as a Home Network Unit [50] in subscriber premises [16] **for receiving downstream IP signals from the optical network terminal [52] routes to FBGA [150] and from [150] for providing upstream IP signals to the optical network terminal [52] (¶0120), the receiving device comprising:**

**an Ethernet switch [54] for routing downstream IP signals** to FBGA [150] and processor [158] associated with VCXO [152] and SRAM [154] packetizes the IP data from Ethernet connection at FBGA [150] and routes to ONT [52], **(¶0120, ¶0121),**

Art Unit: 2427

However, Kimbrough fails to disclose **a modulator for receiving downstream IP video and audio signals from the Ethernet switch, the modulator for modulating the IP video and audio signals to provide RF signals;**

In an analogous art directed toward a similar problem namely improving the results from a modulator for receiving downstream IP video and audio signals. Fig. 1 of Rakib illustrates each customer premises has a gateway [28] and/or cable modem [30] **for receiving downstream IP video and audio signals** over a LAN [9], the cable modem [30] has **a modulator for modulating the IP video and audio signals to provide RF signals** to the settop decoder [18]. Incoming packets for a video program that have been requested via settop decoder 18 are encapsulated **from the Ethernet switch** or other LAN packet and routed to the appropriate settop decoder that requested the program such as settop decoder 18. **(Rakib, col. 12, lines 50 to col. 13 line 20).**

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify a FTTH system of Kimbrough with *an IP modulator of cable modem in customer premises* as taught by Rakib, in order to provide an efficiency video-on-demand service over IP cable TV systems as well as delivery of other services such as wideband internet and T1 telephony access over cable TV systems

**Regarding to claim 2:** The FTTH system of claim 1. Fig. 1 of Kimbrough illustrates **wherein the receiving device HNU [50] for providing IP data signals** as drop line [54] to **a computer via a computer address.** (Kimbrough, ¶0059, ¶0116),

**Regarding to claim 3:** The FTTH system of claim 1, Fig. 1 of Kimbrough

Art Unit: 2427

illustrates **wherein the optical network terminal for providing IP telephone signals** as POT line [56] to **a coupled telephone**. (Kimbrough, ¶0063-¶0064, ¶0115).

**Regarding to claim 12:** The FFTH system of claim 1, Fig. 10 of Kimbrough illustrates wherein the receiving device [50] is a single wire return device (SWRD) (Kimbrough, ¶0118-¶0120) and Fig. 1 of Rakib illustrates LAN 9 as a single wire is provided between the modulator [28] and the at least one DHCT (i.e. set-top box 18).(Rakib, col. 12 line 62 –col. 13 line 20)

7. Claims **14, 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. 2002/0063924 by Kimbrough et al., in view of US Pat. 7,184,664 to Farmer et al., and further in view of US Pat. 5481542 to Logston et al.

**Regarding to claim 14.** Fig. 11 of Kimbrough illustrates **a fiber-to-the-home (FTTH) system** includes HNUFPGA 150 contains [218] **for transmitting and** [214] **for receiving IP signals** [54], (Kimbrough, ¶0124-¶0125), Fig. 3 of Kimbrough illustrates **the FTTH system including a headend facility [12] in communication with a plurality of subscriber premises [16]**, each subscriber premises [16] comprising:

*Fig. 9 of Kimbrough illustrates a Home Network Unit [50] includes QuPlexer [52] as an optical network terminal (ONT) for receiving downstream as 1550nm A/V Optical signal from Optical input [174] and 1310nm voice and data information as upstream IP signals from Laser driver [162] coupled with receiver [160] and FBGA [150] which includes demodulator using 25MHz reference of PLL [152] for detecting data packets (Kimbrough, ¶0112-¶0114), the optical network terminal (ONT) [52] converts the*



Art Unit: 2427

1550nm A/V Optical signal into RF signals routes it to **at least one digital home communications terminal (DHCT)** associated with CATV [60] or DBS [58] of Fig. 1, through connector [172] **for receiving the RF signals** for distribution on TV (Kimbrough, ¶0112) and Kimbrough also teaches the FBGA [150] also drives Ethernet PHY [54] **for routing the IP signals to a coupled device or the FTTH system** (Kimbrough, ¶0116); meets the limitation of **an optical network terminal (ONT) configured to receive downstream and upstream IP signals and route the IP signals to a coupled device or the FTTH system**;

Fig. 10, 11 of Kimbrough illustrate **a receiving device** as a Home Network Unit [50] in subscriber premises [16] **for receiving downstream IP signals from the optical network terminal [52] routes to FBGA [150] and from [150] for providing upstream IP signals to the optical network terminal [52] (¶0120), the receiving device comprising an Ethernet switch [54] for routing downstream IP signals to FBGA [150] and processor [158] associated with VCXO [152] and SRAM [154] packetizes the IP data from Ethernet connection at FBGA [150] and routes to ONT [52], (¶0120, ¶0121)** meets the limitation of **“a receiving device configured to receive downstream IP signals from the ONT, provide RF signals, and provide upstream IP signals to the ONT, the receiving device comprising an Ethernet switch configured to route downstream IP signals”**;

Further, Kimbrough also discloses the ONT [52] converts the Ethernet signals to optical signals, and transmits the optical signals to the QOIU [20A] of headend facility [12] via optical fiber [44/48]) (Kimbrough, ¶0120) meets the limitation of **the ONT is further**

Art Unit: 2427

***configured to convert the Ethernet signals to optical signals, and transmit the optical signals to a headend optical network located in the headend facility via optical fiber;***

Furthermore, Fig. 1, 2 of Kimbrough illustrates ***at least one digital home communications terminal (DHCT) [16] configured to receive the RF signals (i.e. CATV signals, DBS) from the receiving device [50]. (Fig. 2 shows RF signals from CATV and DBS sources [40, 42] is modulated with Optical signal 1550nm at 38A and 38B and distributes to (DHCT) [16] through single wire 48, at least one digital home communications terminal (DHCT) [16] has receiver [50] converts optical signals to RF signals and contributes to Set-top box ],*** (¶0055, ¶0057, ¶0059)

Finally, Kimbrough teaches “a card [20A] has an Ethernet MAC address” as “***a modulator identification number***” of Voice and Data IP signal ***wherein the at least one DHCT [HNU 50] inserts the received modulator identification number*** (MAC address of 20A is embedded in upstream packet) ***in the reverse header information***”, (Kimbrough, ¶0108).

However, Kimbrough is silent with ***a modulator identification number***” of Video and Audio signals.

It would have been obvious to one having ordinary skill in the art to rearrange a optical video distribution [38A-38E] has an Ethernet MAC address” as “***a modulator identification number***” of Video and Audio RF signal ***wherein the at least one DHCT [HNU 50] inserts the received modulator identification number*** (MAC address of

Art Unit: 2427

38A is embedded in upstream packet) ***in the reverse header information***, in order to reprograms the common FPGA 134 by the processor, so as to respond with a video/audio stream of packets that are directed towards the proper HNU 50.

However, Kimbrough is silent with “the at least one DHCT configured to transmit reverse RF signals, *wherein the reverse RF signals include header information and payload data*”; the receiving device for receiving the reverse RF signals, demodulating the reverse RF signals, and converting the demodulated signals to Ethernet signals.

In an analogous art directed toward a similar problem namely improving the results from demodulating the reverse RF signals, and converting the demodulated signals to Ethernet signals. *Fig. 9 of Farmer illustrates an overview of the aforementioned architecture that forms the RF return path for RF signals originating from a video service terminal 117*; (col. 22 lines 49-60) meets the limitation of “**the at least one DHCT configured to transmit reverse RF signals**”

Fig. 8 of Farmer also discloses ***the receiving device*** [140] has interface [535] ***for receiving the reverse RF signals***, low pass filter of [507] passes the RF reverse signals to [511] where ***demodulating the reverse RF signals (Fig. 8, col. 21 lines 20-56 and Fig. 10a, col. 23 lines 49-col. 24 line 38)***, and the processor 550 of Fig. 8 associated with switch [513] for ***converting the demodulated signals to Ethernet signals (col. 21 lines 4-20 and 43-56)***. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify a FTTH system of Kimbrough with the transmit reverse RF signals as taught by Farmer; in order to provide a need in the art for the system and method for communicating optical

Art Unit: 2427

signals between a data service provider and a subscriber that eliminates the use of the coaxial cables and the related hardware and software necessary to support the data signals propagating along the coaxial cables. There is also a need in the art for a system and method that provides a return path for RF signals that are generated by legacy video service terminals. An additional need exists in the art for a method and system for propagating upstream RF packets with very low latency and jitter. A further need exists in the art for a method in system for communicating optical signals between a data service provider and a subscriber that preserves the upstream transmission timing scheme that is controlled by a legacy video service controller. Another need exists in the art for supporting legacy video service controllers and terminals with an all optical network architecture. **(col. 2 lines 45-61)**

Neither Kimbrough nor Farmer teaches the claim feature “the receiving device for receiving the reverse RF signals, demodulating the reverse RF signals, and converting the demodulated signals to Ethernet signals.

In an analogous art directed toward a similar problem namely improving the results from *the reverse RF signals include header information and payload data* and wherein the receiving device converts the modulator identification number into an Internet Protocol address indicative of the modulator identification number”;

Fig. 5A of Logston illustrate the IP packet, Message Cell AAL5 and Message Cell format are used in *reverse* communication from a subscriber premises [STT 30] to Headend [112], IP package as is illustrated in Fig. 5a, **(Logston, col. 14 line 37-col. 15**

**line 2)** meets the limitation of ***wherein the reverse RF signals include header information and payload data***”;

Fig. 5A-5C of Logston illustrate the IP packet, Message Cell AAL5 and Message Cell format are used in communication from a subscriber premises [STT 30] to Headend [112], IP package as is illustrated in Fig. 5a, (**Logston, col. 14 line 37-col. 15 line 2**).

Each device i.e. downstream modulator, has a physical address PA and network address IPA where IPA is assigned by CMC [40] when STT 30 communicates with downstream modulator in headend [112], the PA of STT 30 and modulator need to convert into Logical network address IPA by mapping technique which is called the Boot Terminal Protocol (**Logston, col. 19 line 22-col. 20 line 61**) meets the limitation of **“wherein the receiving device converts the modulator identification number into an Internet Protocol address indicative of the modulator identification number”**.

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify a FTTH system of Kimbrough and Farmer with an interactive request in RF reverse signals as taught by Logston in order to permits the customer to continuously communicate with an information service provider throughout the transmission of the requested programming. (**col. 2 lines 58-60**)

**Regarding to claim 15:** The FFTH system of claim 14, wherein the receiving device is a single wire return device (SWRD) such that a single wire is provided between the receiving device and the at least one DHCT. Fig. 10 of Kimbrough illustrates wherein the receiving device [50] is **a single wire return device (SWRD)** (**Kimbrough, ¶0118-**

¶0120), and Fig. 9 of Farmer illustrates **a single wire is provided between the receiving device [140] and the at least one DHCT [117]**(Farmer, col. 22 lines 49-56)

### ***Allowable Subject Matter***

8. Claims **4-6, 13 and 16** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

**Regarding claim 4**, the examiner concurs with applicant's arguments that the applied art of record fails to teach or suggest the claimed limitations.

**Regarding claims 5-6, 13**: depend from claim 4 and are patentable for at least the same reasons as claim 4 and for the specific elements recited in claims 5-6 and 13.

**Regarding claim 16**: depend from claim 14 and are patentable for at least the same reasons above discussion in claim 4.

### ***Response to Arguments***

10. Applicant's arguments filed 01/14/2009 have been fully considered but they are not persuasive because:

**Part II: Rejection of Claims 1-3 under 35 U.S.C. 103(a)**

Art Unit: 2427

1. Applicant's representative respectfully submits that Kimbrough does not teach the at least one DHCT receives RF signals from a modulator that receives downstream IP video and audio signals from an Ethernet switch recited in claim 1. (Remark, page 7). Examiner respectfully disagree.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

*Fig. 10, 11 of Kimbrough illustrate a receiving device as a Home Network Unit [50] in subscriber premises [16] for receiving downstream IP signals from the optical network terminal [52] routes to FBGA [150] and the receiving device comprising an Ethernet switch [54] for routing downstream IP signals to FBGA [150] (§0120, §0121),*

However, Kimbrough fails to disclose **a modulator for receiving downstream IP video and audio signals from the Ethernet switch, the modulator for modulating the IP video and audio signals to provide RF signals; and at least one DHCT receives RF signals from the modulator that receives downstream IP video and audio signals from the Ethernet switch.**

Rakib makes up for the deficiencies of Kimbrough in *Fig. 1 illustrates each customer premises has a gateway [28] and/or cable modem [30] for receiving downstream IP video and audio signals over a LAN [9], the cable modem [30] has a modulator for modulating the IP video and audio signals to provide RF signals to the settop decoder [18]. Incoming packets for a video program that have been requested via settop decoder 18 are encapsulated from the*

Art Unit: 2427

*Ethernet switch* or other LAN packet and routed to the appropriate settop decoder that requested the program such as settop decoder 18. (Rakib, col. 12, lines 50 to col. 13 line 20). Therefore, it is the examiner's opinion that the combination of Kimbrough and Rakib meets all limitation of "**a modulator for receiving downstream IP video and audio signals from the Ethernet switch, the modulator for modulating the IP video and audio signals to provide RF signals; and at least one DHCT receives RF signals from the modulator that receives downstream IP video and audio signals from the Ethernet switch**".

2. Applicant's representative submits that there is insufficient motivation to combine and modify the teachings of Kimbrough and Rakib in a manner that would make claim 1 obvious. Applicant's representative respectfully submits that rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. m, 127 S. Ct. 1727, 1741 (U.S. 2007) (Remark, page 8). Examiner respectfully disagree for the reasons that follow, clarify the motivation as:

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify an **Ethernet switch** [54] of FTTH system of Kimbrough with **an IP modulator of cable modem in customer premises** as taught by Rakib, in order to provide an efficiency video-on-demand service over IP cable TV systems as well as delivery of other services such as wideband internet and T1



Art Unit: 2427

telephony access over cable TV systems. (*Examiner clarify the motivation based on KSR, rational, part C*)

3. Applicant's representative respectfully submits that, in Rakib, as best understood, the disclosed cable modem 28 provides Ethernet signals to a personal computer 110 (See Rakib, FIG. 1 and Col. 13, lines 38-40). (Remark, page 8). Examiner respectfully disagree with the applicant pointed out the reference not including the Office Action.

Rakib, as best understood, disclosed cable modem 28 provides Ethernet signals that are encapsulated into an Ethernet or other LAN packet from incoming packets for a video program that have been requested via settop decoder 18 (depending upon the LAN 9 in use and sometimes hereafter referred to as simply Ethernet packets for brevity) and routed to the appropriate settop decoder that requested the program such as settop decoder 18, (**Rakib, col. 12, lines 50 to col. 13 line 20**).

It is respectfully submitted that a prima facie case of obviousness has in fact been established and the rejection should be sustained.

Therefore, after a careful consideration of the arguments presented, the Examiner must respectfully disagree for the reasons that follow, maintain the grounds of rejection with the same references.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN LUONG whose telephone number is (571)270-5091. The examiner can normally be reached on Mon.-Thurs., 8:00am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2427

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALAN LUONG/  
Examiner, Art Unit 2427

/Scott Beliveau/  
Supervisory Patent Examiner, Art Unit 2427